

Amendments to the Claims:

Please amend claims 1-5 and 15-19, as shown in the following listing of claims.

This listing of claims will replace all prior versions and listings of claims in the application:

1. (presently amended) A method for controlling operation of a multi-pair gigabit transceiver, the multi-pair gigabit transceiver comprising a Physical Layer ~~E~~control module (PHY ~~E~~control module), a Physical Coding Sublayer module (PCS module) and a ~~D~~igital ~~S~~ignal ~~P~~rocessing module (DSP), the method comprising:

receiving at the PHY ~~E~~control module user-defined inputs from ~~the a~~ ~~S~~erial ~~M~~anagement module and status signals ~~and~~ ~~d~~iagnostics ~~s~~ignals from the DSP and the PCS module; and

~~generating, at the PHY control module, control signals responsive to the user-defined inputs~~_{[[,]]} ~~and the status signals; and~~ ~~d~~iagnostics ~~s~~ignals, from the PHY Control module
~~providing the control signals to the DSP and the PCS module.~~

2. (presently amended) The method of Claim 1 wherein the multi-pair gigabit transceiver further comprises an ~~[[A]]~~uto-~~N~~egotiation module, the method further comprising:

receiving at the PHY ~~E~~control module a link control signal from the ~~[[A]]~~uto-~~N~~egotiation module to start operation of the PCS module and the DSP.

3. (presently amended) The method of Claim 1 wherein the multi-pair gigabit transceiver further comprises a Gigabit Medium Independent Interface (GMII) module, the method further comprising:

receiving at the PHY ~~E~~control module a transmit enable signal from the GMII module to start transmission of data packets.

4. (presently amended) The method of Claim 1 further comprising:

receiving a user-defined reset signal at the PHY ~~E~~control module; and

generating a control signal to reset the DSP and the PCS module.

5. (presently amended) The method of Claim 1 wherein the control signals include a DSP/PCS reset signal to reset the DSP and the PCS module.

6. (original) The method of Claim 1 wherein the DSP comprises a set of echo cancellers and a set of near-end cross-talk (NEXT) cancellers, and wherein the control signals include echo and NEXT control signals to control convergence of the echo cancellers and NEXT cancellers, respectively.

7. (original) The method of Claim 1 wherein the DSP comprises a multi-dimensional decision feedback equalizer (DFE) and wherein the control signals include DFE control signals to control convergence of the multi-dimensional DFE.

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8. (original) The method of Claim 1 wherein the DSP comprises a timing recovery (TR) module and wherein the control signals include TR control signals to control convergence of the timing recovery module.

9-14. (cancelled)

15. (presently amended) A PHY control module for controlling operation of a multi-pair ~~gigabit~~ Ethernet transceiver, the multi-pair Ethernet transceiver comprising a Physical Coding Sublayer module (PCS module) and a Digital Signal Processing module (DSP), the PHY control module comprising:

a main state machine ~~for receiving~~ configured to receive user-defined inputs from the a ~~S~~erial ~~M~~anagement module and status signals ~~and diagnostics signals~~ from the DSP and the PCS module, ~~to generate and for generating~~ control signals[[,]] responsive to the user-defined inputs[[,]] and the status signals and diagnostics signals, and to provide the control signals to the DSP and the PCS module.

16. (presently amended) The PHY control module of Claim 15 wherein the multi-pair gigabit Ethernet transceiver further comprises an [[A]]auto-Negotiation module and wherein the main state machine receives a link control signal from the [[A]]uto-Negotiation module to start operation of the PCS module and the DSP.

17. (presently amended) The PHY control module of Claim 15 wherein the multi-pair gigabit Ethernet transceiver further comprises a Gigabit Medium Independent Interface (GMII) module and wherein the main state machine receives a transmit enable signal from the GMII module to start transmission of data packets.

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18. (presently amended) The PHY control module of Claim 15 wherein the main state machine receives a user-defined reset signal and generates a control signal to reset the DSP and the PCS module.

19. (presently amended) The PHY control module of Claim 15 wherein the control signals include a DSP/PCS reset signal to reset the DSP and the PCS module.

20. (original) The PHY control module of Claim 15 wherein the DSP comprises a set of echo cancellers and a set of near-end cross-talk (NEXT) cancellers, and wherein the control signals include echo and NEXT control signals to control convergence of the echo cancellers and NEXT cancellers, respectively.

21. (original) The PHY control module of Claim 15 wherein the DSP comprises a multi-dimensional decision feedback equalizer (DFE) and wherein the control signals include DFE control signals to control convergence of the multi-dimensional DFE.

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22. (original) The PHY control module of Claim 15 wherein the DSP comprises a timing recovery (TR) module and wherein the control signals include TR control signals to control convergence of the timing recovery module.
